REMARKS

In the Office Action, the Examiner:

- rejects claims 1-10 and 15-20 under 35 U.S.C. § 103(a) as allegedly unpatentable over ERICKSON et al. (U.S. Patent No. 6,882,765; hereinafter ERICKSON) and WALTERS et al. (U.S. Patent Application Pub. No. 2002/0176131; hereinafter WALTERS);
- rejects claim 11 under 35 U.S.C. § 103(a) as allegedly unpatentable over CHIU et al. (U.S. Patent Application Pub. No. 2002/0063916; hereinafter CHIU) and WALTERS; and
- rejects claim 12-14 under 35 U.S.C. § 103(a) as allegedly unpatentable over CHIU, WALTERS, and ERICKSON.

Applicant traverses these rejections. Claims 1-20 are pending.

Rejection under 35 U.S.C. § 103(a) based on ERICKSON and WALTERS

Claims 1-10 and 15-20 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over ERICKSON and WALTERS. Applicant respectfully traverses this rejection.

Amended independent claim 1 recites a method comprising providing, in an optical network, an optical cross-connect system (OXC) having a working port and a spare port; providing a router having a working port to transmit or receive high priority data to or from the working port of the OXC and a protection port to transmit or receive low priority data to or from the spare port of the OXC; detecting a failure in the router; sending a signal from the router to the OXC, where the signal indicates the failure; causing the working port of the OXC to connect to the

protection port of the router in response to detection of the signal, where the transmission of low priority data to or from the router is preempted by the transmission of the high priority data to or from the router, in response to the failure of the router; and transmitting the high priority data from the router to the OXC via the protection port. Applicant submits that ERICKSON and WALTERS, whether taken alone or in any reasonable combination, do not disclose or suggest one or more features of claim 1.

For example, ERICKSON and WALTERS do not disclose or suggest "causing a working port of an OXC [that is in an optical network] to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router [via the protection port] is preempted by a transmission of a high priority data to or from the router, in response to a failure of the router," as recited by claim 1. The Examiner admits that ERICKSON does not disclose, "a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data is preempted by the transmission of the high priority data, in response to failure of the router..." and relies on Fig. 53 and ¶¶ 487 and 508 of WALTERS for allegedly disclosing this feature. (Office Action, p. 5.) Applicant disagrees with the Examiner's interpretation of WALTERS.

At the outset, Applicant notes that the Examiner does not address the specific language of claim 1. The Examiner alleges that WALTERS discloses "a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data is

preempted by the transmission of the high priority data, in response to failure of the router..." However, claim 1 specifically recites, inter alia, "causing **a working port of an OXC** [that is in an optical network] to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router [via the protection port] is preempted by a transmission of a high priority data to or from the router, in response to a failure of the router." (Emphasis added.) Since the Examiner has not addressed the specific language recited in claim 1, Applicant submits that the Examiner has not established a prima facie case of obviousness with respect to claim 1.

In any event, ¶ 0487 of WALTERS discloses:

> 1:1 path protection is supported using the same hardware features but different control software. With 1:1 protection, two lightpaths are setup with one path supporting high priority data traffic and the other supporting lower priority, pre-emptable traffic. When a failure occurs on the lightpath supporting the high priority traffic, the low priority traffic is preempted and the high priority traffic is re-routed over the low priority lightpath. While 1:1 protection provides the capability to use the protection path for low priority traffic, it will take longer to switchover since both ingress and egress OTS's are involved and the NMS must co-ordinate the switchover. However, it is expected that service can be restored within one second.

This paragraph of WALTERS does not disclose or suggest "causing a working port of an OXC [that is in an optical network] to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router [via the protection port] is preempted by a transmission of a high priority data to or from the router, in response to a failure of the router," as recited by claim 1. Rather, this section of WALTERS discloses that in a 1:1 protection path, two light paths are setup between ingress OTS (OXC) and egress OTS (OXC). One of the light paths supports high priority traffic and the other light

path supports low priority traffic. When the high priority light path fails, low priority traffic is preempted, and the low priority light path is used to transmit high priority traffic from the ingress OTS to the egress OTS.

With reference to Fig. 53 (which is described by ¶ 0508) of WALTERS, the Examiner alleges that OTS B corresponds to a router and that OTS C corresponds to the claimed OXC. Applicant submits that the OTS B cannot reasonably be construed to be a router having a working port to transmit or receive high priority data to or from the working port of the OXC and a protection port to transmit or receive low priority data to or from the spare port of the OXC. WALTERS specifically discloses that an OTS is an OXC. (See e.g., WALTERS, ¶ 0071.) Thus, Fig. 53 of WALTERS merely discloses that an OXC (OTC B) uses a 1:1 protection path to transmit data to another OXC (OTC C). Applicant further submits that WALTERS specifically discloses that a 1:1 path protection is used between an ingress OTS and an egress OTS (that are part of an optical network). WALTERS does not disclose or suggest that 1:1 path protection is used between a router and an OTS (that is part of the optical network), as would be required under the Examiner's interpretation of WALTERS. Therefore, this section of WALTERS does not disclose or suggest "causing a working port of an OXC [that is in an optical network] to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router [via the protection port] is preempted by a transmission of a high priority data to or from the router, in response to a failure of the router," as recited by claim 1.

Moreover, Applicant notes that WALTERS specifically discloses that a high-priority flow is re-routed using an ALI card associated with a low priority flow. Re-routing a high-priority flow using an ALI card associated with a low priority flow cannot reasonably be construed as corresponding to connecting a working port of an OXC to a protection port of a router.

With respect to the reasons for combining ERICKSON and WALTERS, the Examiner alleges (Office Action, p. 3):

> It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Erickson, and have a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data to be preempted by the transmission of the high priority data, in response to the failure; and transmitting high priority data via a protection port, as taught by Walters, thus providing an efficient data transmission system by utilizing the usage of bandwidth by using protection path to carry pre-emptable traffic so that incase of a failure high priority data can be transmitted using the preemptable protection path, as discussed by Walters(Paragraph 6).

Applicant submits that the Examiner's allegation is merely a conclusory statement of an alleged benefit of the combination. Such conclusory statements have been repeatedly held to be insufficient for establishing a *prima facie* case of obviousness. In this respect, Applicants rely upon KSR International Co. v. Teleflex Inc., 550 U.S. 398 (2007) (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)), where it was held that rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

Furthermore, as discussed above, WALTER specifically discloses using a 1:1 protection path, which allows low priority traffic to be preempted by high priority traffic, between two OXCs. The Examiner does not reasonably explain how

WALTERS' 1:1 protection path (which is only disclosed as being between two OXCs) can reasonably be incorporated into ERICKSON, which specifically discloses a protection path between a router and OXC. Applicant submits that the Examiner's allegations fall short of providing the articulated reasoning required by KSR.

Furthermore, Applicant believes that the Examiner has not considered and substantively responded to Applicant's remarks (submitted in the previous Response) with respect to this allegation, as is required of the Examiner. (See M.P.E.P., § 707.07(f).) Therefore, if the Examiner maintains this rejection of claim 1, Applicant requests that the Examiner fully consider and respond to the above remarks regarding claim 1.

For at least the foregoing reasons, Applicant submits that claim 1 is patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. § 103(a) based on ERICKSON and WALTERS.

Claims 2-5 depend from claim 1. Therefore, Applicant submits that claims 2-5 are patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1.

Independent claims 6 and 15 recite features similar to (yet possibly of different scope than) features described above with respect to claim 1. Therefore, Applicant submits that claims 6 and 15 are patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination, for at least

reasons similar to the reasons set forth above with respect to claim 1. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of amended claims 6 and 15 under 35 U.S.C. § 103(a) based on ERICKSON and WALTERS.

Claims 7-10 depend from claim 6 and claims 16-20 depend from claim 15. Therefore, Applicant submits that claims 7-10 and 16-20 are patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claims 6 and 15, respectively.

Rejection under 35 U.S.C. § 103(a) based on CHIU and WALTERS

Claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over CHIU and WALTERS. Applicant respectfully traverses this rejection.

Claim 11 recites an optical cross-connect system, located in an optical network, the optical cross-connect system comprising a spare port to transmit low priority data to or from a router that is external to the optical cross-connect system; and a working port to transmit high priority data to or from a primary router that is external to the optical cross-connect system, where the working port is connected to the router in response to a failure of the primary router, and where the transmission of low priority data to or from the router is preempted by the transmission of the high priority data to or from the router, in response to the failure of the primary router. CHIU and WALTERS do not disclose or suggest one or more features of claim 11.

For example, CHIU and PAN do not disclose or suggest "a working port [of an OXC] to transmit high priority data to or from a primary router that is external to the optical cross-connect system, where the working port [of the OXC] is connected to the router in response to a failure of the primary router, and where the transmission of low priority data from the router is preempted by the transmission of the high priority data from the router, in response to the failure of the primary router," as recited by claim 11. The Examiner relies on Fig. 3 and ¶ 0045 of CHUI for allegedly disclosing, "a working port to transmit high priority data to or from a primary router that is external to the optical cross-connect system," and on Figs. 3 and 6 and ¶¶ 0045 and 0048 of CHIU for allegedly disclosing, "where the working port is connected to the router in response to a failure of the primary router." (Office Action, p. 14.) The Examiner apparently admits that CHIU does not disclose, "the transmission of low priority data from the router is preempted by the transmission of the high priority data from the router, in response to the failure of the primary router," and relies on ¶¶ 0408 and 0508, and Fig. 53 of WALTERS for allegedly disclosing this feature. (Office Action, p. 15.) Applicant disagrees with the Examiner's interpretations of CHIU and WALTERS.

Fig. 3 of CHIU (which is described at ¶ [0044] and ¶ [0045] of CHIU) discloses that an OXC_A is connected to router 100_A and an OXC_B that is connected to router 100_{B1} and router 100_{B2}. Furthermore, router 100_{B1} and router 100_{B2} are connected together by a light path. A light path connects router 100_A and router 100_{B1} during normal operation. If router 100_{B1} fails, OXC_B creates a new light path connection between router 100_A and router 100_{B2}. This new connection uses the

same port on router 100_A, as was used to connect to failed router 100_{B1}. Router 100_{B2} connects to the light path using either the same port as was used to connect to router 100_{B1} or a spare port on router 100_{B2} (See, ¶ [0045].) Therefore, Fig. 3 and ¶ 0045 of CHIU does not disclose or suggest that "a working port [of an OXC] to transmit high priority data to or from a primary router that is external to the optical cross-connect system, **where the working port [of the OXC] is connected to the router in response to a failure of the primary router**, and where the transmission of low priority data from the router is preempted by the transmission of the high priority data from the router, in response to the failure of the primary router," as recited by claim 11. (Emphasis added.) In fact, Fig. 3 and ¶ 0045 of CHIU do not even mention that a working port of an OXC is connected to a router **in response** to a failure of a primary router. (Emphasis added.)

Fig. 6 of CHIU (which is described at ¶ 0047) discloses

> The failure of router 100_{B1}, at step 600, may also be detected by the redundant router 100_{B2}, which is at the same node as the failed router, at step 605, as depicted in the flowchart in FIG. 6. In step 610, router 100_{B2} sends a request to OXC_B that it connects to directly, also at node B, to restore the connection to office A by setting up a new lightpath link to routers 100_A. In step 615, the signaling mechanism may forward the request from OXC_B to OXC_A to complete all necessary switching to establish the new lightpath. Then, in step 620, upon restoration of the lightpath link to office/node A, routing in the IP layer will may automatically discover the new link between 100_A and 100_{B2}, and router 100_{B1} will be replaced by router 100_{B2} for all IP traffic through office/node B, and restoration may be complete at step 625.

This paragraph of CHIU discloses that redundant router 100_{B2} may detect a failure of router 100_{B1}, and send a signal to OXC_B to set up a new light path to router 100_A. Fig. 6 and ¶ 0047 of CHIU do not disclose or suggest that "a working port [of an OXC] to transmit high priority data to or from a primary router that is

external to the optical cross-connect system, **where the working port [of the OXC] is connected to the router in response to a failure of the primary router**, and where the transmission of low priority data from the router is preempted by the transmission of the high priority data from the router, in response to the failure of the primary router," as recited by claim 11. (Emphasis added.) In fact, Fig. 6 and ¶ 0047 of CHIU do not even mention that a working port of an OXC is connected to a router **in response** to a failure of a primary router. (Emphasis added.) Applicant notes that CHIU's redundant router 100_{B2} is always connected to OXC_B. Therefore, CHIU's redundant router 100_{B2} cannot reasonably be construed as connecting to a working port of OXC_B that is used to transmit high priority data to/from the primary router, in response to a failure of CHIU's primary router 100_A, as would be required under the Examiner's interpretation of CHIU.

Paragraph 0048 (which describes Fig. 7) of CHIU discloses:

> Further, as shown in the flowchart of FIG. 7, the failure of router 100_{B1}, at step 700, may be detected by the cross-connect OXC_B, which is disposed at the same office/node B as the failed router 100_{B1} as in step 705. Since OXC_B controls connections for all routers at node B, in step 710, OXC_B may restore all inter-office links associated with failed router 100_{B1} with router 100_{B2} via the signaling mechanisms, thus ending restoration at step 715.

This paragraph of CHIU discloses that OXC_B may detect a failure of router 100_{B1} and restore all inter-office links. This paragraph of CHIU does not disclose or suggest that "a working port [of an OXC] to transmit high priority data to or from a primary router that is external to the optical cross-connect system, **where the working port [of the OXC] is connected to the router in response to a failure of the**

primary router, and where the transmission of low priority data from the router is preempted by the transmission of the high priority data from the router, in response to the failure of the primary router," as recited by claim 11. (Emphasis added.) In fact, ¶ 0048 of CHIU does not even mention that a working port of an OXC that is used to transmit high priority data to/from the primary router is connected to a router **in response** to a failure of a primary router. (Emphasis added.)

As discussed above, with respect to claim 1, WALTERS specifically discloses a 1:1 protection path between two OXCs. Accordingly, the disclosure of WALTERS does not correct the deficiencies in the disclosure of CHIU, as discussed above.

Moreover, with regard to the Examiner's purported combination of CHIU and WALTERS, Applicant submits that the Examiner has not established a prima facie case of obviousness, in light of KSR, for at least reasons similar to those set forth above with respect to claim 1.

For at least the foregoing reasons, Applicant submits that claim 11 is patentable over CHIU and WALTERS. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of claim 11 under 35 U.S.C. § 103(a) based on CHIU and WALTERS.

Rejection under 35 U.S.C. § 103(a) based on CHIU, WALTERS, and ERICKSON

Claims 12-14 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over CHIU, WALTERS, and ERICKSON. Applicant respectfully traverses this rejection.

Claims 12-14 depend from claim 11. Without acquiescing in the rejection of claims 12-14, Applicant submits that the disclosure of ERICKSON does not remedy the deficiencies in the disclosures of CHIU and WALTERS, as set forth above with respect to claim 11. Therefore, Applicant submits that claims 12-14 are patentable over CHIU, WALTERS, and ERICKSON, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 11.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicant's representative, then the Examiner is invited to contact the undersigned by telephone to expedite prosecution of this application.

As Applicant's remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicant's silence as to assertions by the

Examiner in the Office Action or certain requirements that may be applicable to such assertions (e.g., whether a reference constitutes prior art, assertions as to dependent claims, reasons for combining or modifying a reference, allegations of Official Notice, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such assertions/requirements in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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